

# PATENT ABSTRACTS OF JAPAN

(11) Publication number : 58-070536

(43) Date of publication of application : 27.04.1983

(51) Int.CI. H01L 21/324

H01L 21/20

H01L 21/265

(21) Application number : 56-169533

(71) Applicant : FUJITSU LTD

(22) Date of filing : 22.10.1981

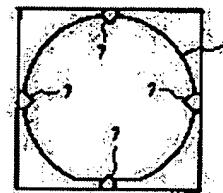
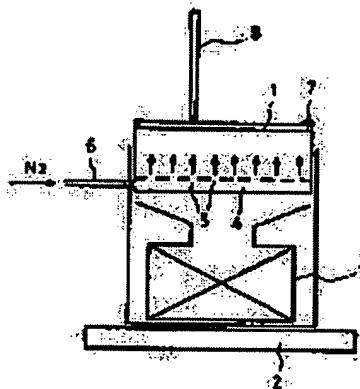
(72) Inventor : OSADA TOSHIHIKO

## (54) LASER ANNEALING METHOD

### (57) Abstract:

**PURPOSE:** To execute a laser annealing with less limitation in preheating temperature by floating a sample to be treated to a predetermined position by means of an inert gas flow and preheating the sample by a microwave heating method.

**CONSTITUTION:** A sample 1 is placed on a gas injection board 4 with its poly-Si layer directed upward, and N<sub>2</sub> of 100° C is introduced from a port 6 and jetted out from holes 5. This causes the sample 1 to float up to contact pawls. Next the sample 1 is heated up to approximately 400°C by operating a high-frequency power source 3. If the sample 1 is heated up, the gas injection board does not absorb the microwave and its temperature is not raised up because it is a hollow flat construction which is made of glass plate etc. Furthermore, as the radiating direction of the high-frequency power source 3 can be limited only toward the sample 1 by an adequate designing, an XY table 2 is not also heated up. Anything other than the sample 1 is not heated up, and the sample 1 is under non-contact state except against the pawls 7, accordingly the sample can be heated up to any



*required temperature without thermal conduction from the sample. Then, the poly-Si is heated up to the order of 1,400°C by irradiation of a CW laser 8, and a single crystal can be obtained without any influence onto the device.*

---

**LEGAL STATUS**

*[Date of request for examination]*

*[Date of sending the examiner's decision of rejection]*

*[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]*

*[Date of final disposal for application]*

*[Patent number]*

*[Date of registration]*

*[Number of appeal against examiner's decision of rejection]*

*[Date of requesting appeal against examiner's decision of rejection]*

*[Date of extinction of right]*

*Copyright (C); 1998,2003 Japan Patent Office*